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| APPLICATION NO.            | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------|-------------|----------------------|---------------------|------------------|
| 10/724,629                 | 12/02/2003  | Martyn Richards      | 84719               | 2024             |
| 20736                      | 7590        | 03/23/2005           |                     |                  |
| MANELLI DENISON & SELTER   |             |                      | EXAMINER            |                  |
| 2000 M STREET NW SUITE 700 |             |                      | EDGAR, RICHARD A    |                  |
| WASHINGTON, DC 20036-3307  |             |                      |                     |                  |
|                            |             |                      | ART UNIT            | PAPER NUMBER     |
|                            |             |                      | 3745                |                  |

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| <b>Office Action Summary</b> | <b>Application No.</b>           | <b>Applicant(s)</b>     |
|------------------------------|----------------------------------|-------------------------|
|                              | 10/724,629                       | RICHARDS ET AL.         |
|                              | <b>Examiner</b><br>Richard Edgar | <b>Art Unit</b><br>3745 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 02 December 2003 under 37 CFR 1.53(b).

2a)  This action is **FINAL**.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-16 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-5,13 and 16 is/are rejected.

7)  Claim(s) 6-12,14 and 15 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 02 December 2003 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02 Dec 2003.

4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_ .

5)  Notice of Informal Patent Application (PTO-152)

6)  Other: \_\_\_\_\_

**DETAILED ACTION**

***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in the United Kingdom on 20 December 2002. It is noted, however, that applicant has not filed a certified copy of the 0229680.4 application as required by 35 U.S.C. 119(b).

***Drawings***

Figures 1, 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "68" has been used to designate both fingers (Fig. 6) and smaller fingers (Fig. 7). The examiner suggests changing the numeral 68 in Fig. 7 to 68', and also amending the corresponding specification, specifically at page 10, line 11.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of

any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

The disclosure is objected to because of the following informalities:

On page 1, line 24, “restrain to” should be --restrain the--.

On page 1, line 29, “forwards” should be --forward--.

On page 7, line 10, “Fig. 2” should be --Fig. 4--.

On page 7, line 17, “61” should be --50--.

On page 10, line 3, “18” should be --68--.

On page 10, line 11, --than restraint fingers 68-- should be inserted after “are smaller”.

Appropriate correction is required.

***Claim Objections***

Claims 2, 8, 13 and 14 are objected to because of the following informalities:

In claims 2 and 8, --wherein-- should be inserted after “claim1,” and “claim 6”, respectively.

In claim 13, line 2, “member” should be –means--.

In claim 14, line 2, “member” should be –means--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 13 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 3,734,646 (Perkins hereinafter).

Perkins teaches in Fig. 3 a blade arrangement for gas turbine engine, the blade arrangement comprising: a plurality of blades 12 mounted rotation on a disc 22 so as to extend radially outwardly therefrom; and a retention member 62, the retention member including an attachment portion 64 which is attached to the disc 22 and an abutment portion 73 for resisting forward axial movement of at least one of the blades relative to the disc wherein the blade arrangement further comprises restraint means 74 spaced from the attachment portion of the retention member, for substantially preventing radially outward movement of the abutment portion of the retention member when a forward axial force is applied by the blade to the abutment portion (see col. 4, line 58 through col. 5, line 21).

Regarding claims 2 and 16, the blade is a compressor blade in a turbine (see col. 1, lines 14-15).

With respect to claim 3, the retention member 62 is shaped such that the abutment portion 73 contacts part of the blade 12 when a forward axial force is applied to the blade, to resist forward axial movement of the blade (col. 5, lines 20-21). Further,

regarding claim 4, the geometry of the blade arrangement is such that when the blade applies a forward axial force to the abutment portion 73 of the retention member 62, a vector representing the resultant force applied to the retention member 62 passes substantially through the attachment portion 64 of the retention member 62 (i.e. the forward blade force is absorbed at the attachment portion 64). With respect to claim 5, the restraint means 74 includes a part of the retention member which is shaped such that its radial movement is substantially prevented by an adjacent part of the blade (col. 5, lines 18-19).

Concerning claim 13, Perkins shows the restraint means 74 substantially cylindrical in shape, and the adjacent part 54 of the fan blade being substantially cylindrical in shape and located radially outwardly from the restraint means, whereby radially outwardly movement of the restraint member is prevented.

#### ***Allowable Subject Matter***

Claims 6-12 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Each of claims 6-12 and 14-15 require a restraint member or finger extending in the axial rearward direction, whereas the Perkins reference only teaches a notch forming the restraint means 74. And in the examiner's opinion, one having ordinary skill in the art would not have been motivated at the time the invention was made to alter the

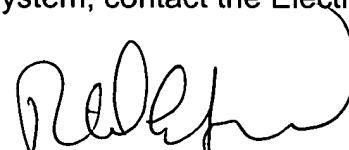
retention member of Perkins to have an elongate restraint member or finger since this modification would increase the complexity of the retention member without adding any new benefits.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-4816. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7 am- 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Edgar  
Examiner  
Art Unit 3745

RE



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31/9/05